CITY OF MILPITAS
Building & Safety Department
455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240
www.ci.milpitas.ca.gov

COMMERCIAL WATER HEATER

1. PERMIT INFORMATION:

- ❑ The replacement of an existing water heater requires a plumbing permit. If the water heater is a new installation, or if the existing heater is being relocated, permits must be obtained in person at the Permit Center, Building & Safety Department, 455 E. Calaveras Blvd.
- ❑ This handout only covers installation of water heaters in commercial locations. Refer to the *Residential Water Heater* handout for all residential occupancies including apartments, condominiums and townhomes.
- ❑ The replacement of water piping requires separate online permit.
- ❑ A Building Permit may be issued only to a State of California Licensed Contractor or the Building Owner.
- ❑ If the work is performed by the Building Owner personally or by his/her workers and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- ❑ If the Building Owner hires workers, State Law requires the Owner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.

2. INSTALLATION REQUIREMENTS

- ❑ **Building Codes:** All work must comply with the 2013 California Building Code (CBC), 2013 California Plumbing Code (CPC), 2013 California Mechanical Code (CMC), 2013 California Electrical Code (CEC), 2013 California Energy Code based upon 2013 Building Energy Efficiency Standards (CEnC), 2013 California Green Building Standards Code (CalGreen) and 2014 Milpitas Municipal Code (MMC).
- ❑ All pipe, pipe fittings, traps, fixtures, material, and devices used in a plumbing system shall be listed or labeled (third-party certified) by an approved listing agency (CPC 301.1).
- ❑ Listed water heaters shall be installed in accordance with their listings and the manufacturer's instructions (CPC 505.1).
- ❑ Location:
  - A fuel burning (gas) water heater may be installed in a closet located in a bathroom if installed in accordance with CPC Section 504.1.
  - Water heaters, except direct vent type, shall be located as close as practical to the vent (CPC 504.2).
  - Clearances shall not be such as to interfere with combustion air, draft hood clearance and relief, and accessibility for servicing. (CPC 504.3.1)
- ❑ General requirements:
  - Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion. Straps shall be located within the top 1/3 of the water heater unit and one within the bottom 1/3. The bottom strap must be located at least 4" above the water heater controls. (CPC 507.2)

- Water heaters supported on the ground shall rest on level concrete or other approved base extending not less than three (3) inches above the adjoining ground level (CPC 507.3).

- Water heaters located in a garage, or in an adjacent space opening into the garage, must be elevated so the burners and burner-ignition devices are at least 18" above the garage floor surface, unless the heater is listed as flammable vapor ignition resistant (FVIR). Heater shall be located or protected so it is not subject to physical damage by a moving vehicle. (CPC 507.14)

- Water heaters located in enclosed, basement, and underground parking structures shall be installed in accordance with NFPA 88A, *Standard for Parking Structures* (CPC 508.14.1). Water heaters installed in repair garages shall be in accordance with CPC Section 507.14.2.

- Installer shall leave the manufacturer's installation, operating, and maintenance instructions in a location on the premises where they will be readily available for reference and guidance to the inspector, service personnel, and the owner or operator (CPC 507.24).

- Water heaters installed outdoors shall be listed for outdoor installation or provided with protection to the degree the environment requires. Appliances listed for outdoor installation shall be installed in accordance with its listing. (CPC 507.25)

- Water heaters installed on roofs shall be installed in accordance with CPC Section 508.0.

- Water heaters installed in attics, attic-ceiling assembly, floor-ceiling assembly, or floor-subfloor assembly where damage results from a leaking water heater, a water-tight pan of corrosion-resistant materials shall be installed beneath the heater with not less than a ¾ inch drain to an approved location (CPC 507.4). The end of the drain should be in a location that will draw attention to the need for determining the cause of the leak.

- ❑ Tankless water heaters shall be listed by an approved testing agency (UL, IAPMO, etc.) and be installed in accordance with it's listing and the manufacturer's requirements. If replacing an existing tank heater with a tankless, it is likely the gas piping will have to be replaced with a larger pipe run back to the meter. Piping shall be sized and installed in accordance with CPC Chapter 12. Some tankless heaters also require an electrical connection and an electrical permit may be required.

- ❑ Pressure regulator - where the water pressure is in excess of 80 psi, an approved type pressure regulator preceded by an adequate strainer. The regulator and strainer shall be accessible, protected from freezing, and shall have the strainer readily accessible for cleaning without removing the regulator or strainer body or disconnecting the supply piping. An approved expansion tank shall be installed in the cold water distribution piping downstream of each such regulator. (CPC 608.2)

- ❑ Expansion Tank - any water system provided with a check valve, backflow preventer, pressure regulator or any other normally closed device that prevents dissipation of building pressure back into the water main shall be provided with an approved, listed, and adequately sized expansion tank or other approved device having a similar function to control thermal expansion. Such expansion tank or other approved device shall be installed on the building side of the check valve, backflow preventer, or other device and shall be sized and installed in accordance with the manufacturer's recommendation. (CPC 608.3)

- ❑ Grounding and bonding - metal water (hot and cold) and gas piping systems installed in or attached to a building or structure shall be bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where of sufficient size, or to the one or more grounding electrodes used in accordance with CEC Section 250.104.

- ❑ Heaters installed in attics shall comply with the following: (CPC 508.4)

  - An attic access opening and passageway shall be installed that is at least as large as the largest component of the appliance but not less than 22w inches x 30 inches.

  - Where the height of the passageway is less than 6 feet, the distance from the access opening to the appliance shall not exceed 20 feet.

  - The passageway shall be unobstructed and shall have a solid flooring not less than 24 inches wide.

  - A level working platform not less than 30 inches by 30 inches shall be provided in front of the service side of the heater.

  - A permanent 120 volt receptacle outlet and a lighting fixture shall be installed near the appliance. The switch controlling the lighting fixture shall be located at the entrance to the passageway.

  - If heater is installed on top of ceiling framing, with the total weight not exceeding 400 lbs, then, as a minimum: (Policy #BDP-BLG04)

    - Water heater shall be located on a ¾" plywood platform attached to the ceiling joists with #10 wood screw or 8d penny nails 6" o.c. at the plywood panel edges and 12"o.c. at intermediate joists.

    - If seismic strapping to the adjacent walls is not possible, provide strapping to the ceiling joists below. Use ¾" x 24 gauge perforated plumbers tape encircling top 1/3 of the water heater. Provide minimum 3 evenly spaced diagonal braces to ceiling joists with similar plumbers tape or ½" diameter EMT conduit with flatten edges. Use 1/4" diameter x 1" round head machine bolt with washer and nut for bracing connections.

    - Attach diagonal braces to wood ceiling joists with ¼" diameter x 3" long lag screws or 1/4" diameter x 2" machine bolts with washers and nut to metal joists.

    - Protect plywood with corrosion-resistant pan as required by CPC 508.4 (see above).

- ❑ Water valves and unions:

  - A fullway valve shall be installed on the cold water supply pipe to each water heater at or near the water heater (CPC 606.2).

  - Valves shall be brass or other approved material. Each gate or ball valve shall be a fullway type with working parts of non-corrosive material. Valves shall meet the requirements of NSF 61, Standard for Drinking Water System Components, as referenced in Table 14-1. (CPC 606.1)

  - A union shall be installed in the water supply piping not more than 12 inches of regulating equipment, water heating, conditioning tanks, and similar equipment that requires service by removal or replacement (CPC 609.5).

- ❑ Water piping connectors:

  - Listed flexible copper water connectors shall be installed in readily accessible locations, unless otherwise listed (CPC 604.4).

  - Flexible corrugated connectors of copper or stainless steel shall be limited to 24 inches in length (CPC 604.12).

  - Flexible metallic water heater connectors or reinforced flexible water heater connectors connecting water heating to the piping system shall be in compliance with the applicable standards referenced in Table 14-1 (CPC 604.13).

- ❑ Relief valves:

  - All storage water heaters shall have an approved, listed, adequately sized combination pressure and temperature relief valve (CPC 608.3).

  - The installation of temperature, pressure, and vacuum relief devices or combinations thereof, and automatic gas shutoff devices, shall be installed in accordance with their listings and the manufacturer's instructions. A shutoff valve shall not be placed between the relief valve and the water heater or on discharge pipes between such valves and the atmosphere. (CPC 504.6).

  - Relief valves shall be provided with a drain, not smaller than the relief valve outlet, of galvanized steel, hard-drawn copper piping and fittings, CPVC or listed relief valve drain tube with fittings that will not reduce the internal bore of the pipe or tubing (straight lengths as opposed to coils) and shall extend from the valve to the outside of the building, with the end of the pipe not more than two feet nor less than 6 inches above ground or the flood level of the area receiving the discharge and pointing downward. Such drains shall be permitted to terminate at other approved locations (such as a garage floor if the floor slopes to drain and will not cause damage). Relief valve drains shall not terminate in a building's crawl space. No part of such drain pipe shall be trapped or subject to freezing. The terminal end of the drain pipe shall not be threaded. (CPC 608.5)

  - Most manufacturers allow a maximum of four 90 degree elbows and a maximum length 30 feet.

  - Discharge from a relief valve into a water heater pan shall be prohibited (CPC 507.5).

  - Where a hot-water storage tank or an indirect water heater is located at an elevation above the fixture outlets in the hot-water system, a vacuum relief valve shall be installed on the storage tank or heater (CPC 608.7).

- ❑ Gas piping and gas shut-off valves:

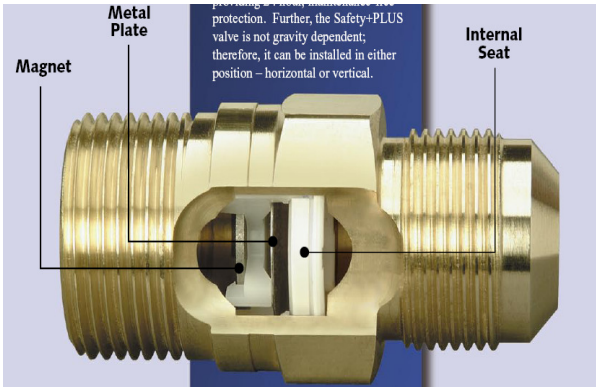
  - New gas piping must be installed back to the meter or calculations must be provided to show the existing piping is adequately sized.

  - It is the responsibility of the installer to verify that the new or existing gas supply is correctly sized before installation. Refer to the separate handout *"Natural Gas piping"* for additional information.

  - Gas connectors must comply with CPC Section 1211.0. Listed flexible gas connectors in compliance with CSA Z21.24, Standard for Connectors for Gas Appliances may be used if installed in accordance with their listing. Connectors must be located completely in the same room as the appliance.

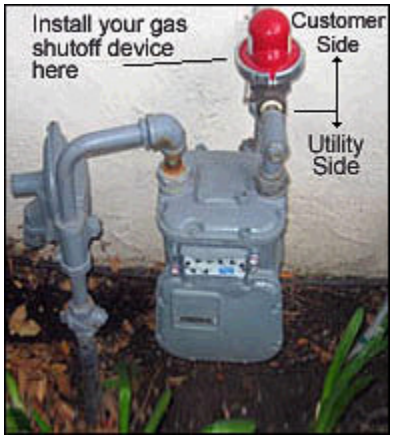
- An approved Excess Flow Gas Shut-off Device (non-motion sensitive) shall be installed at the gas fuel appliance outlet when replacing any existing or installing any new gas fuel appliance. The Excess Flow Device shall be installed between the shutoff valve and the connector (see diagram page 4 *not the photo below*). (MMC II-170-2.00)

Close up view of an excess flow device:



- An approved Seismic Gas Shut-off Device (motion sensitive) *or* an approved Excess Flow Gas Shut-off Device (non-motion sensitive) shall be installed downstream of the gas utility meter (after PG&E service tee), but upstream of any appliances, when providing alteration or addition to the existing gas fuel line. (MMC II-170-2.00)

"California Valve"



- Automatic Gas Shut-off Devices shall be installed by a contractor licensed in the appropriate classification by the State of California and in accordance with the manufacturer's instructions.

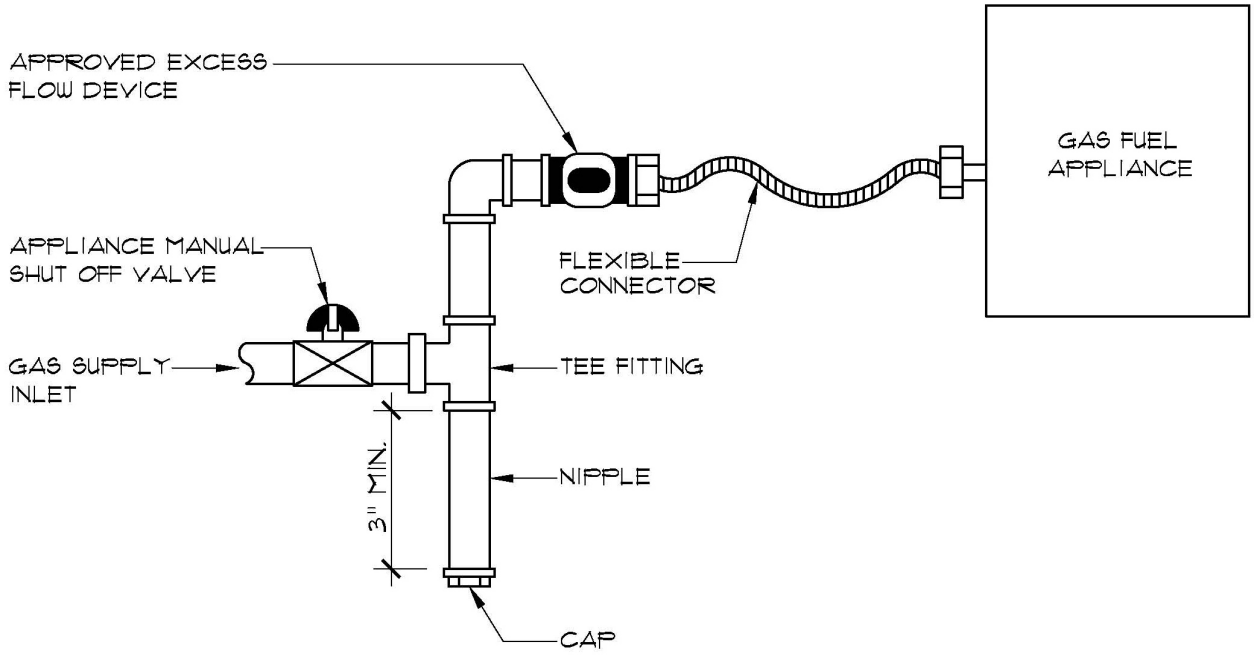
- Seismic Gas Shut-off Devices (motion sensitive) must be mounted rigidly to the exterior of the building or structure containing the fuel gas piping. This requirement need not apply if the Building and Safety Department determines that the Seismic Gas Shut-off Device (motion sensitive) has been tested and listed for an alternate method of installation.

- Both Seismic Gas Shut-off Devices (motion sensitive) and Excess Flow Gas Shut-off Devices (non-motion sensitive) must be certified by the Office of State Architect and be listed by an approved listing and testing agency such as IAS, IAPMO, UL or the Office of State Architect.

- Both Seismic Gas Shut-off Devices (motion sensitive) and Excess Flow Gas Shut-off Devices (non-motion sensitive) must have a thirty (30) year warranty which warrants that the valve or device is free from defects and will continue to operate properly for thirty (30) years from the date of installation.

- Where Automatic Gas Shut-off Devices are installed voluntarily or as required by code, they shall be maintained for the life of the building or structure or be replaced with a valve or device complying with the requirements of this section.

- Where a sediment trap is not incorporated as a part of the gas appliance, a sediment trap shall be installed as close to the inlet of the appliance as practical at the time of equipment installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated below, or other device recognized as an effective sediment trap. Trap shall be installed after shutoff valve to allow for draining. Sediment traps are not required on illuminating appliances, ranges, clothes dryers, decorative vented appliances for installation in vented fireplaces, gas fireplaces, and outdoor grills. (CMC 1211.8)



- ❑ Combustion air:

  - Gas appliances of other than natural draft design and other than Category I vented appliances shall be provided with combustion, ventilation, and dilution air in accordance with the appliance manufacturer's instructions (CPC 506.1.1). Most water heaters vent by gravity, their flue gases are lighter than the air in the environment in which the combustion occurs so they naturally rise up in a vent that is open to the atmosphere at the top. The open draft hood on the top of the water heater allows additional air to dilute the flue gases. Insufficient combustion air is hazardous. If there is not sufficient oxygen to fully burn the fuel at the correct temperature, deadly carbon monoxide will also be a product of combustion. If the air pressure in the water heater space is lower than that in the vent, products of combustion might "spill" out of the draft hood and enter the interior environment.

  - Makeup air requirements for the operation of exhaust fans, kitchen ventilation systems, clothes dryers, and fireplaces shall be considered in determining the adequacy of a space to provide combustion air requirements (CPC 506.1.3).

  - Combustion air must be provided per CPC Section 506.0. When the appliance is located in a large room or space (e.g. garage) the combustion air may come from that area. When located in a closet, combustion air must be provided by one or more openings between the closet and a large room or space, directly to the outside, to an area that communicates directly with the outside, or a combination of these. The following are minimum opening requirements:

- Indoor air:
  - All air from indoors by infiltration (appliance in same room) – the room must have a minimum 50 cubic feet per 1,000 Btu/hour of all appliances. Indoor rooms must have sufficient infiltration from the outdoors to continuously replenish the indoor air. The rate of infiltration is dependent on the number and size of gaps and cracks around openings in the building. Buildings of Unusually Tight Construction (less than 40% air changes per hour) require calculations of the infiltration rate (CPC 506.2)
  - Openings used to connect indoor spaces on the same story – each opening shall have a free area of not less than 1 square inch/1,000 Btu/hour of the total input rating of all gas appliances in the space, but not less than 100 square inches. One opening shall commence within 12 inches of the top, and one opening shall commence within 12 inches of the bottom of the enclosure. The minimum dimension of the air openings shall not be less than 3 inches. (CPC 506.3)
  - Openings used to connect indoor spaces on different stories – the volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more openings in doors or floors having a total free area of not less than 2 square inches/1,000 Btu/hour of the total input rating of all gas appliances in the space (CPC 506.3)
- Outdoor air – Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with the following. The minimum dimension of the air opening(s) shall not be less than 3 inches. (CPC 506.4)
  - Two permanent openings, one within 12 inches of the top and one within 12 inches of the bottom of the enclosure. The openings shall communicate directly, or by ducts, with the outdoors or spaces that freely communicate with the outdoors as follows:
    - Where directly communicating with the outdoors or where communicating through vertical ducts, each opening shall have a free area of not less than 1 square inch/4,000 Btu/hour of total input rating of all appliances in the enclosure.
    - Where communicating with the outdoors through horizontal ducts, each opening shall have a free area of not less than 1 square inch/2,000 Btu/hour of total input rating of all appliances in the enclosure.
  - One permanent opening, commencing within twelve inches of the top of the enclosure. The appliance shall have clearances of not less than 1 inch from the sides and back and 6 inches from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors and shall have a minimum free area of:
    - 1 square inch/3,000 Btu/hour of total input rating of all appliances in the enclosure, and not less than the sum of the areas of all vent connectors in the space.
- Combination of indoor and outdoor combustion air shall be in accordance with the following: (CPC 506.5)
  - Indoor openings shall comply with the requirements for indoor air above.
  - Outdoor openings shall comply with the requirements for outdoor air above.

- The outdoor openings size shall be calculated as follows:
  - The ratio of interior spaces shall be the available volume of communicating spaces divided by the required volume.
  - The outdoor size reduction factor shall be one (1) minus the ratio of interior spaces.
  - The minimum size of outdoor openings shall be the full size of outdoor openings calculated in accordance with the requirements for outdoor air above (one or two openings), multiplied by the reduction factor. The dimension of air openings shall not be less than 3 inches.

- Mechanical air supply – where combustion air is provided by a mechanical air supply system, the combustion air shall be supplied from outdoors at the minimum rate of 0.35 cubic feet/min per 1,000 Btu/hour for all appliances located in the space (CPC 506.7).
  - Where exhaust fans are installed, additional air shall be provided to replace the exhausted air.
  - Each of the appliances served shall be interlocked to the mechanical air supply system to prevent main burner operation where the mechanical air supply system is not in operation.
  - Where combustion air is provided by the building's mechanical ventilation system, the system shall provide the specified combustion air rate in addition to the required ventilation air.

- Louvers, grilles and screens: (CPC 506.8)
  - The required size of openings shall be based on the net free area of each opening. Where the free area through a louver or grille is known, it shall be used. Where the design and free area are not known, it shall be assumed that wood louvers will have a 25 percent free area and metal louvers and grilles will have a 75 percent free area. Non-motorized louvers and grilles shall be fixed in the open position.
  - Screens shall be not less than ¼ inch mesh.
  - Motorized louvers shall be interlocked with the appliance.

- Combustion air ducts: (CPC 506.9)
  - Ducts shall be of galvanized steel or a material having equivalent corrosion resistance, strength, and rigidity. Within dwelling units, unobstructed stud and joist spaces shall be prohibited from conveying combustion air, provided that not more than one fireblock is removed.
  - Ducts shall terminate in an unobstructed space, allowing free movement of combustion air to the appliances.
  - Ducts shall serve a single space.
  - Ducts shall not service both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.
  - Ducts shall not be screened where terminating in an attic space.

- Intakes for combustion air ducts located exterior to the building shall have the lowest side of the combustion air intake openings located at least 12 inches vertically from the adjoining finished grade level.

- Horizontal upper combustion air ducts shall not slope downward toward the source of combustion air.

❑ Vents shall be as follows:

- A venting system shall be designed and constructed to develop a positive flow adequate to remove flue or vent gases to the outside atmosphere (CPC 509.3). The venting system shall satisfy the draft requirements of the appliance in accordance with the terms of its listing and the manufacturer's instructions (CPC 509.3.1). Refer to Table 510.1.2(5) for capacity of existing asbestos cement vent pipe.

- Single-wall metal pipe shall not be used as a vent in dwellings and residential occupancies (CPC 509.7.3).

- For sizing an individual gas vent for a single, draft-hood-equipped appliance, the effective area of the vent connector and the gas vent shall be at least the area of the appliance draft hood outlet but no larger than seven times the draft hood outlet area [CPC 509.6.3.1(3)]. Vents for two draft-hood-equipped appliances shall be the size of the larger draft hood outlet area plus 50 percent of the smaller draft hood outlet area [CPC 509.6.3.1(4)].

- Type B vents shall extend in a generally vertical direction with offsets not exceeding 45 degrees, except that a vent system having not more than one 60 degree offset shall be permitted. Any angle greater than 45 degrees from the vertical is considered horizontal. The total horizontal distance of a vent plus the horizontal vent connector serving draft-hood-equipped appliances shall into exceed 75 percent of the vertical height of the vent. (CPC 509.6.1)

- Type B and L vents shall terminate at least 5 feet in vertical height above the highest connected appliance draft hood or flue collar (CPC 509.6.2.1).

- Screws, rivets and other fasteners shall not penetrate the inner wall of double wall gas vents. (CPC 509.6.1.1).

- The vent passing through a roof shall extend through the entire roof flashing, roof jack, or roof thimble and be terminated with a listed termination cap (CPC 509.6).

- The vent shall terminate a minimum 12" (more if roof slope exceeds 6:12) above the roof (measured from the high side of the roof where the vent passes through to the lowest discharge opening) or 2 feet above a vertical wall or similar obstruction within 8 feet. (CPC 509.6.2)

- A vent shall terminate at least 3 feet above a force air inlet located within 10 feet (CPC 509.6.2.5).

- A vent extending through an exterior wall shall not terminate adjacent to the wall or below eaves or parapets, except as permitted in CPC 509.2.4 and 509.3.3.

- Direct vent appliances shall terminate in accordance with CPC 509.8.2.

- Mechanical draft systems shall be installed in accordance with CPC 509.3.3.

- Vents serving gas appliances located on more than one floor shall be sized and installed in accordance with CPC Section 509.6.4.

- Vents must be supported and spaced in accordance with their listing and the manufacturer's instructions (CPC 509.6.5)

❑ Vent connectors shall be installed as follows:

- A vent connector shall be used to connect the water heater to the vent, unless the vent connects directly to the heater (CPC 509.10).

- Vent connectors shall be: (CPC 509.10.1.2)

  - Type B vent material.
  - Galvanized sheet steel at least 0.018 inches thick.
  - Aluminum (1100 or 3003 alloy or equivalent) sheet at least 0.027 inches thick.
  - Stainless steel sheet at least 0.012 inches thick.
  - Smooth interior wall metal pipe having resistance to heat and corrosion equal to or exceeding that of the galvanized, aluminum or stainless material listed above.
  - Listed vent connector.

- Listed single-wall vent connectors may be used but must be located in the same room as the heater (CPC 509. 7.3).

- Single wall metal pipe shall not originate in any unoccupied attic or concealed space (CPC 509.7.3.2).

- A vent connector shall not pass through any ceiling, floor, or fire-resistance-rated wall. A single-wall metal pipe shall not pass through any interior wall. A vent connector made of Type B material and serving a heater with a draft-hood may pass through walls if clearance to combustibles is maintained. (CPC 509.10.12)

- Where two or more openings are provided into one vent, the openings shall either be at different levels, or the connectors shall be attached to the vertical portion of the vent at an angle of 45 degrees or less relative to the vertical. Where two or more connectors enter a common vent, the smaller connector shall enter at the highest level possible consistent with the available headroom or clearance to combustible material. Vent connectors serving natural draft venting appliances shall not be connected to a vent serving other appliances operating under positive static pressure. (CPC 509.10.3)

- The minimum clearances from single wall metal connectors and combustibles shall be 6". The clearances from Type B connectors shall be per its listing. (CPC 509.10.4)

- Vent connector shall be as short as practical and the water heater located as close as practical to the vent. The maximum horizontal length of a single-wall connector shall be 75 percent of the height of the vent. The maximum horizontal length of a type B connector shall be 100 percent of the height of the vent. The maximum length of an individual connector for a vent system serving multiple appliances, from the appliance outlet to the junction with the common vent or another connector shall be 100 percent of the height of the vent. (CPC 509.10.7)

- Joints between sections of vent connector piping and connections to flue collars or draft hood outlets shall be fastened by sheet metal screws, in accordance with the manufacturer's instructions, or other approved means (CPC 509.10.5).

- Vent connectors shall be installed without any dips or sags and shall slope upward toward the vent not less than 1/4 inch per foot (CPC 509.10.6).

- Vent connectors shall be supported for the design and weight of the material employed to maintain clearances and prevent physical damage and separation of joints (CPC 509.10.8).

- Vent connectors serving two draft-hood equipment appliances shall be at least the area of the larger vent connector plus 50 percent of the areas of small flue collar outlets (CPC 509.10.2.3).

- Vent connector for an appliance with a single draft hood outlet shall be the size of the collar. The size of the connector when there is more than one outlet or more than one appliance served a common connector shall be in accordance with CPC 509.10.2.

3. ENERGY REQUIREMENTS:

- ❑ Water heater installations must comply with all applicable mandatory measures of the California Energy Code.

- ❑ Water heater must be certified by the California Energy Commission. For a listing of approved appliances, go to http://www.appliances.energy.ca.gov/.

- ❑ Service water heating systems and equipment may be installed only if the manufacturer has certified that the system or equipment complies with all of the requirements of the California Energy Code [Section 113(a)]. For a listing of approved appliances, go to http://www.energy.ca.gov/appliances.

- ❑ Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required [CEnC Section 110.3(c) (2)].

- ❑ Temperature controls for public lavatories shall limit the outlet temperature to 110^{o}F [CEnC Section 110.3(c) (3)].

4. INSPECTION PROCEDURES:

- ❑ A final inspection is required after the water heater has been installed and all work completed. The Permit Card and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after issuance or last inspection passed, whichever is the latest.

5. QUESTIONS:

- ❑ If you have any questions regarding your project contact the Building & Safety Department at (408) 586-3240